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ORIGINAL COMMUNICATIONS.

ARTICLE I.—*Report on the Changes which take place in the Blood in the Continued Forms of Fever.* Read to the Illinois State Medical Society, June, 1857. By N. S. DAVIS, M. D., Chicago, Ill.

There are but few subjects of greater importance which could engage our attention than those connected with the pathology of fevers. The doctrines of the ancient humoralists have long since sunk to oblivion, and the dogmas of an exclusive Solidism, as advocated by Darwin, Brown, and Cullen, are rapidly passing in the same direction; while the investigations of the present day are carried on in relation to both solids and fluids, for the sole purpose of developing the facts of physiology and pathology, regardless of all theory; and, though great progress has been made, and much valuable knowledge gained concerning the composition of the blood, the secretions, and some of the organized tissues, by the researches of such men as Andral, Simon, Bernard, Hall, Brown-Sequard, etc., yet more remains to be done, for we can hardly take up any question connected with disease and its progress without finding points yet entirely unelucidated, or explained only by hypothesis.

This is eminently true of the special subject which has been

assigned to me for investigation. Concerning the changes which take place in the blood of patients laboring under continued fever, we find but few facts recorded in our medical literature which have been developed by carefully executed experiments and analyses.

Of general statements we have abundance. Thus, Chomel examined the blood in the heart and aorta of thirty fatal cases of typhoid fever, and found "small scanty fibrinous concretions in six, dark coagula in nine, and dark fluid blood in fifteen." Dr. Gerhard describes the blood found in the heart and larger vessels after death from *typhus* fever as uncoagulated, thick in consistence and very dark color. Dr. Jenner says: "The fluid condition of the blood generally was observed in about equal proportions in the subjects dead from typhoid and typhus fevers; but it was far more profoundly diseased, *i. e.*, it deviated far more from its healthy condition in the cases of typhus than in those of typhoid fever." Dr. Upham noted particularly the condition of the blood contained in the heart and larger vessels, after death, from "maculated typhus or ship fever," and he uniformly describes it as "thin, dark and oily," or "fluid, dark and sizy; its clot soft, and readily broken down."

Rokitansky says: "The typhus-crasis is marked by the destruction—the diminution of the fibrin, and the comparative preponderence of the blood-globules. The typhus blood is in various degrees fluid, and of a deep purple color. It forms, if any, but scanty, loose, soft, humid, deliquescent coagula, reddened by the imbibition of pigment holding plasma."

Andral and Gavarret, of Paris, made several analyses of the blood in typhoid fever patients, and generally found the fibrin diminished in proportion to the severity of the disease. In no case did they find this constituent increased. Drs. Jones and Sieveking, in their recent work on Pathological Anatomy, state that in several cases of intestinal typhoid fever the globules of the blood had been found increased to 142, and in one to 149 parts in 1,000. My own examinations of the blood in continued fever have chiefly been made during the life of the patient; and in no well marked case have I found it presenting the same appearances as in health.

The two following cases will better illustrate the changes actually presented than any general statement of average results:

CASE I.

Dec. 9, 1852.—Mr. Gibbs, a German, aged thirty years, was admitted into the Mercy Hospital in the advanced stage of enteric or typhoid fever. It is now three weeks since the attack commenced, or since he was confined to his bed. He is moderately emaciated; his countenance dull and inexpressive; his face and lips deep red; eyes heavy; mouth dry, with some brown sordes around the teeth; tongue red, pointed, smooth and dry, dullness of hearing; moderate delirium, especially during the night; skin dry, harsh, and above the natural temperature; pulse 112 per minute, soft, and easily compressed; abdomen covered with patches of a red papular eruption, full and tympanitic; urine scanty; discharges from the bowels average three or four per day, are thin, brown and offensive, and during the last eighteen hours they have been more frequent, copious, and tinged with blood. I opened a vein, and took from his arm 1,634 grs. of blood for examination.

TREATMENT.

The patient was ordered a blister over the abdomen, and an emulsion, consisting of oil of turpentine, ʒij.; tinct. opii, ʒij.; gum arabic and white sugar, each ℥ij.; rubbed thoroughly together; with the addition of water, ℥ii.; of which a fluid drachm was to be given every three hours, with beef tea, well salted, for nourishment, and sponging of the surface with warm water every afternoon.

This treatment was continued, without alteration, four days, with a gradual improvement of all the symptoms. Three grains of quinine were then added to each morning dose of the emulsion; and in four days more convalescence was fully established. Soon after convalescence, an abscess of moderate size appeared on one arm, was opened, and discharged considerable unhealthy pus, but soon healed. December 30th, he was discharged from the hospital quite well.

EXAMINATION OF THE BLOOD.

The blood, as it flowed from the vein, was of a very dark

color, and, examined under a magnifying power of 850 diameters, soon after it was drawn, the red corpuscles were seen much more variable in size and more irregular in appearance than in healthy blood; one-third of the whole number brought into view were much below the ordinary size, while a few appeared nearly as large as the white corpuscles; and the same disparity in size was maintained after the addition of distilled water. A much larger number were also irregular, shrivelled or plaited than in healthy blood. No white corpuscles were seen on any of the fields examined, though they were diligently sought for. The blood coagulated in the vessel very slowly, and in partially disconnected masses, which, however, slowly united into a uniform clot, preserving the shape of the cup, without any buff, and less firm and compact than the clots of healthy blood.

After standing thirty-six hours, the 1,634 grs. of blood gave 675 grs. of clear serum, and 959 grs. of clot. The several proximate constituents having been carefully separated, presented the following results, viz.:

WHOLE AMOUNT OF BLOOD ANALYSED, 1634 GRAINS.

Water,	1327.50	grains.
Red corpuscles,	174.47	"
Albumen,	109.93	"
Fibrin,	4.50	"
Matter soluble in ether,	1.10	"
Ash or saline matter,	16.50	"
Total,	1634.00	"

PROPORTION IN 1000 PARTS.

Water,	812.42	parts.
Red corpuscles,	106.77	"
Albumen,	67.27	"
Fibrin,	2.75	"
Fatty matter,	67	"
Saline,	10.09	"
Total,	999.97	"

CASE 2.

Mr. M., native of Ireland, aged 22 years; in the Medical Ward of the Mercy Hospital, Feb. 13th, 1857. Has been sick

18 days with continued fever. Says he took salts and senna in the beginning, which operated excessively, producing numerous large and watery evacuations from the bowels. At present he presents all the characteristics of profound typhus; such as constant muttering delirium, sub-sultus tendinum, brown sordes on the lips and teeth, dry and brown tongue, pulse 120 per minute and weak, abdomen moderately tympanitic and covered with a small red eruption, which extended also over the chest; evacuations from the bowels frequent, dark brown color and very thin. I opened a vein and took 1060 grains of blood for microscopic examination and chemical analysis. The blood drawn was of a dark or purplish color; coagulated slowly and with very little contraction of the clot; while under the microscope the red corpuscles appeared less uniform in size, and less disposed to adhere to each other in the form of *roleau*, than in health. The number of white corpuscles, too, were less than normal. A careful chemical analysis was then made, with the following result, viz.:

WHOLE AMOUNT OF BLOOD ANALYZED, 1060 GRAINS

Water,	838.5	grains.
Red corpuscles,	138.0	"
Albumen,	71.0	"
Fibrin,	2.0	"
Saline and extractive,	10.5	"
Total,	1060.0	"

PROPORTION IN 1000 PARTS OF BLOOD.

Water,	791.0	parts.
Red corpuscles,	130.1	"
Albumen,	67.0	"
Fibrin,	1.9	"
Extractive and salts,	10.0	"
Total,	1000.0	"

The two foregoing cases have been selected and the phenomena in connection with the analysis given in detail, because I supposed them to be fair representations of the more grave forms of typhoid and typhus fevers.

I have taken care to preserve the history of all the cases

from which blood was analyzed, thereby avoiding a defect which exists in relation to nearly all the analytical tables contained in our works on Pathology.

It will be observed that in neither of the cases detailed was there any great deviation from the normal proportion in any of the proximate elements of the blood. In the first, the water is moderately in excess; the red corpuscles and albumen in the same ratio diminished, while the fibrin and other constituents remained normal. In the second case the water was in normal proportion, the red corpuscles slightly in excess, while both the albumen and fibrin are diminished. From all the analyses I have made, of blood from patients laboring under all the forms of continued fever, I have been led to the following conclusions, viz.:

1st. Taking the average results of twelve analyses of blood from as many different patients with continued fever, I find the relative proportion of the different constituents or proximate elements very nearly normal.

2d. Taking separate cases, I find the blood taken from such as have been accompanied by more than the ordinary amount of watery intestinal discharges, to exhibit an excessive proportion of red corpuscles, while the reverse is true of such as have little or no such excess of intestinal evacuations; and hence that every analysis, to be valuable, must be accompanied by a detailed history of the case.

3d. While we thus find comparatively little change in the amount or relative proportion of the several proximate elements of the blood in continued fever, the alterations in *quality* are striking and uniform. Thus, in every case examined, the color was darker and more purple than normal; the fibrin coagulated very slowly, contracted but little, and the fibrills formed by the coagulation possessed less tenacity than in healthy blood; while the red corpuscles, viewed under the microscope, appear less bi-concave, less uniform in size, and exhibit less attraction or affinity for each other; and the white corpuscles appeared to be very deficient in number.

These are very important changes, and they will not fail to suggest, to the reflecting physician, explanations of many of

the more important phenomena and results of continued fever. But as the object of the committee, in making this report, is solely to develope facts, their practical application will be passed by on this occasion, more especially as any attempt of this kind would involve a full consideration of all the changes, functional and structural, which occur in the solids as well as the fluids of the body, and also the consecutive order of their development. Although the duties of this committee were limited to investigations concerning the blood of continued fever patients, yet, for purposes of comparison and contrast, I shall introduce here two cases of periodical fever, with analyses of the blood. Another motive for making the deviation, is found in the fact that such analyses have been very rarely made. On this point, the late Dr. Drake, in his voluminous work entitled a "Systematic Treatise," etc., makes the following observation, viz.: "I do not know that any experiments have been made on the relative proportion of the proximate elements of the blood, in *our* autumnal fever. Andral and Gavarret, in the hospitals of Paris, made such experiments on the blood of seven patients laboring under intermittents of long standing, and found the mean proportion of fibrin to be *three and a third* of one thousand parts, the normal quantity being three. As many chronic cases of the fever are made such by inflammation of some organ, we may presume that in these cases some were complicated with such inflammations. As to the other proximate elements of the blood, the solid residue of the serum was eighty parts in the thousand, the natural proportion; but the blood corpuscles were, on an average, one hundred and four parts in the thousand, while one hundred and twenty-seven is the normal number. Thus, it appears that protracted intermittents produce impoverishment of the blood—spanemia—the condition present in chlorosis; and this accounts in part for the peculiar hue and puffy visage of old ague patients, who so closely simulate chlorosis in their appearance."—See page 820.

The two cases of periodical fever which I have selected to represent that type of disease, and from which the blood was analyzed with great care, are copied from my note books in detail as follows, viz.:

CASE 1.

Peter Johnson, a Swede, aged thirty-five years, was admitted into the Illinois General Hospital, November 27th, 1852.

PRESENT APPEARANCE OR SYMPTOMS.

The countenance is dull and inexpressive; face bloated; skin sallow; lips and tongue pale; eyes clear; tongue and mouth clean and moist; universal œdema of the cellular tissue to such an extent that pressure leaves pits on any part of the body and extremities, the latter being much swollen; abdominal dulness and fluctuation, indicating moderate effusion into the cavity of the peritoneum; hepatic dulness appeared to occupy a less space than natural, leading to suspicion of incipient cirrhosis; certainly no evidence of enlargement of the liver or spleen; thoracic resonance good, and respiratory murmur normal, except feebler than usual; rhythm and sounds of the heart normal, except a plain anæmic bellow's murmur; pulse small, soft, and 80 per minute; bowels regular and fæces natural in appearance; urine scanty and loaded with urate of ammonia, giving it a clouded appearance; appetite impaired; muscular weakness very great; position recumbent and dorsal.

HISTORY.

The patient has had intermittent fever during the last two months, at least, but cannot learn the exact length of time. He has still regular paroxysms every morning, exhibiting a well marked chill, succeeded by a hot stage, during which the pulse is much excited and the anæmic bellow's murmur of the heart very loud and distinct.

TREATMENT.

Viewing the case as one of extreme loss of tonicity in the solids, and great impoverishment of the blood, from a protracted continuance of that peculiar disturbance of the vital properties, which constitutes the essential pathology of periodical fever, without any satisfactory evidence of local visceral disease, the plain indications of treatment were, first, to interrupt the paroxysms, and, second, to improve the tonicity of the solids and the composition of the fluids.

To fulfil the first, he was ordered chloride of sodium ʒj., and

sulphate of quinine 12 grs., to be divided into four powders, and one given at such intervals that the whole would be taken before the time for the next chill.

Nov. 28th.—Had a chill this morning, but much lighter than before. Continue same medicine until four more doses are taken, with animal broth well salted for nourishment.

Nov. 29th.—No chill or fever this morning. All other symptoms as at first. Ordered a powder composed of chloride of sodium 10 grs., sulph. quinine 2 grs., carb. of iron 3 grs., to be given four times a day, and continue same diet.

Nov. 30th.—No return of chills or fever; otherwise all the symptoms, including the debility, the dropsical effusions, etc., were the same as on the day of admission. I now took from his arm, in a clean glass cup, 1448 grs., Troy weight, of blood for examination and analysis. He was then ordered a powder, consisting of extract of sanguinis or dried beef's blood 20 grs., and sulph. quinine 2 grs., to be taken four times a day, with an infusion of juniper berries and *uva ursi* for a drink. A diet of animal broth, milk and bread was continued. This treatment was steadily persisted in with a pretty uniform improvement in all the symptoms for three weeks, when he was discharged from the hospital without any symptoms of intermittent fever or dropsy, and feeling quite well. I met him again in the street on the 30th of December, when he looked and felt entirely well.

EXAMINATION OF THE BLOOD.

The blood coagulated as quickly as in health; the clot becoming firm, small, floating in a clear serum, and retaining accurately the shape of the vessel containing it, without being either cupped or buffed.

Viewed under the microscope, with an object glass magnifying 850 diameters, the red corpuscles differed in no respect from their appearance in healthy blood, except they were in a slight degree more distended or globular. Occasionally one was seen presenting a shrivelled, irregular, and corrugated appearance, but not more so than is sometimes seen in persons apparently in good health. The white corpuscles were certainly deficient in number, only *one* being seen during an examination of six

or eight different fields, and the addition, to some of them, of distilled water and acetic acid for the purpose of rendering them more distinct.

The 1448 grs. of blood, after standing, yielded 1048 grs. of clear serum, and 400 grs. of clot. The latter being carefully washed and the product dried over sulph. acid, under the receiver of an air pump, gave 2 grs. of fibrin.

The 1048 grs. of clear serum, by evaporation and careful drying over the acid in a vacuum, yielded 75 grs. of solid matter, and 973 grs. of water.

The 398 grs. of clot, treated in the same manner, gave 98 grs. of solid matter, and 300 grs. of water.

The 75 grs. of solid matter from the serum, and the 98 grs. from the clot, after digesting twenty-four hours in strong sulphuric ether, yielded to the latter only 1 gr. of soluble matter. The solid matter of the serum left, after incineration in a porcelain crucible, 1.5 grs. of ash. That of the clot yielded, by the same process, 4.5 grs. of ash.

The combined results may be stated in tabular form, as follows, viz.:

WHOLE AMOUNT OF BLOOD EXAMINED, 1448 GRAINS.

Water,	1273.0	grains.
Red corpuscles,	72.1	"
Albumen,	93.9	"
Fibrin,	2.0	"
Matter soluble in ether,	1.0	"
Ash or saline matter,	6.0	"
Total,	1448.0	"

PROPORTION IN 1000 PARTS OF BLOOD.

Water,	879.14	parts.
Red corpuscles,	49.79	"
Albumen,	64.84	"
Fibrin,	1.38	"
Matter soluble in ether,	.69	"
Saline matter,	4.14	"
Total,	999.98	"

CASE 2.

The description of this case may be condensed from my note book, as follows, viz.:

Mr. Sampson, a Swede, aged 23 years, was admitted into the hospital, Nov. 28, 1852. Says he has had a quotidian intermittent almost constantly during the last six or eight weeks. At present he is moderately emaciated; countenance sallow; lips and tongue pale; pulse 85 per minute, and easily compressed; cutaneous and urinary secretions diminished, with slight tendency to diarrhœa, and great muscular weakness. No signs of œdema or of visceral disease, either in the chest or abdomen.

His intermittent paroxysms were promptly arrested by the exhibition of chloride of sodium and sulph. of quinine, in the same manner as in case No. 1. On the fourth day after admission, no chills having recurred since the second day, I took 1410 grs. of blood from his arm for examination, and ordered him extract of sanguinis, 15 grs., four times a day, with a nutritous diet. He continued this treatment steadily, with uniform improvement, and was discharged, apparently well, near the end of the third week after admission.

EXAMINATION OF THE BLOOD.

In coagulating and under the microscope, this blood presented the same phenomena and appearances as No. 1. The clot was larger in proportion to the serum, but there was the same shape, firmness, etc., and the same deficiency of white corpuscles. The different steps of analysis were conducted in all respects the same as in the former case, and the result stated in tabular form is as follows, viz.:

WHOLE AMOUNT OF BLOOD EXAMINED, 1410 GRAINS.

Water,	1182.50	grains.
Red corpuscles,	116.74	"
Albumen,	98.26	"
Fibrin,	3.50	"
Matter soluble in ether,	1.00	"
Ash or saline matter,	8.00	"
Total,	1410,00	"

PROPORTION PER 1000 PARTS.

Water, ...	838.65	parts.
Red corpuscles, ...	82.79	"
Albumen, ...	69.68	"
Fibrin, ...	2.48	"
Fatty matter, ...	.71	"
Saline matter, ...	5.67	"
Total, ...	999.98	"

The two cases here given in detail are selected as fair representatives of the uncomplicated periodical fever in different stages of its progress.

The first, represents the extreme changes induced in the fluids and solids of the body by the disease when protracted and uninfluenced by medical treatment. The second, represents the changes induced in the fluids in the more recent cases, such as are daily met with in practice. All my analyses of blood from patients laboring under attacks of simple intermittent and remittent fevers, lead to the following conclusions, viz :

1st. The qualities or properties of the several constituents of the blood appear normal.

2nd. The relative quantity of the different proximate elements of the blood undergo marked and important changes. The red corpuscles undergo a marked and nearly uniform diminution in proportion to the duration of the disease, sometimes presenting no more than one-third of the normal proportion. The white corpuscles were also deficient in all the specimens examined by me; while the albumen and fibrin were only slightly below the normal proportion.

3rd. The foregoing changes in the solid and organized constituents of the blood, leave the water relatively in excess, rendering the whole mass of the circulating fluid thinner than normal, and consequently favoring the occurrence of congestions and dropsical effusions.

These conclusions are strikingly diverse from those derived from an examination of the blood during the progress of continued fever, as already given. In one respect they differ from the results obtained by MM. Andral and Gaverret, who found the proportion of fibrin increased in the blood of their

patients with intermittent fever. But as Dr. Drake suggests, it is quite probable that the excess of fibrin in their cases was owing to local inflammations as complications, all their cases being chronic or relapsing agues, and consequently not fair representatives of the disease.

Members of the society will also notice that in one respect the results I have obtained from analyses of blood in continued fever, differ from the statements of M. Andral and from the generally received opinions of the profession. I allude to the relative proportion of fibrin, which is stated to be deficient in all the graver cases of typhoid and typhus fevers, but which was found very little below the normal standard in any of the cases examined by me. I am satisfied that the general impression of deficiency of fibrin has been exaggerated from two causes: First, its slow and imperfect coagulation in the blood found in the heart and vessels after death, or even when drawn from a vein during life, gives at once the impression of deficiency of the coagulating material. Second, the method of separating the fibrin adopted by Andral, consisted in stirring or whipping the freshly drawn blood with a bundle of sticks, so as to entangle the fibrin on them. It seems to me obvious that whenever the *quality* of the fibrin is so impaired that it coagulates slowly and its fibres contain little tenacity, this would constitute a very imperfect method of separating it. To avoid loss from the diminished coagulability and tenacity of the fibrin, I adopted in all my analyses the plan of allowing the blood to remain at rest nearly twenty-four hours, thereby giving time for the clot to be fully formed. It was then inclosed in a piece of fine linen cloth and washed with water, until nothimg but the pure white fibrin was left on the cloth; after which, it was thoroughly dried and weighed. By this process the fibrin is more perfectly separated than by simply stirring it as in the other method, especially when this constituent after solidification possesses but little tenacity.

The results of my investigations thus far suggests several questions of much interest and practical importance in relation to the pathology of both types of fever.

1st. What is the immediate cause of such marked impair-

ment of the properties of the several constituents of the blood in continued fever? Is it some poison introduced into the blood from without, or an excess of some one of the gases naturally existing in the blood, which are known to lessen the coagulability of fibrin and give to the whole blood a purplish hue, such as the carbonic and ammoniacal gases? Dr. Richardson, of London, in a recent prize essay, claims that the fibrin of the blood in a healthy state is held in solution while in the living system by the presence of a certain quantity of ammoniacal gas. Is there an excess of this substance present in the blood of continued fever patients?

2d. What are the pathological conditions or peculiar changes in the properties of the solid or organized structures of the body in both types of fever, and what relation do such changes bear to the changes in the blood?

To answer these questions intelligibly requires much and careful investigation, embracing many new and well devised experiments and analyses, which want of time has hitherto prevented me from attempting.

I hope, however, that members of the society will give the subject their careful attention, always remembering that one fact or truth well established is of more value to science than an hundred theories.

ARTICLE II.—*Hints, towards an enquiry, whether Tubercular tendency may be eradicated from the system, and by what means.*—By B. WOODWARD, M. D., Galesburg, Illinois, 1857.

That tubercular disease is, in all its essentials, of scrofulous origin, is the general opinion of the profession. That it is hereditary is also acknowledged. What this hereditary tendency is, or in what it consists, is not fully answered. Paget in his Surgical Pathology, page 33, says, "It seems to be established as a general law in pathology, that diseased structures evidently incorporate materials that *had their origin, or previous existence* in the blood. Such are most of those inoculable, or other blood diseases in which morbid organisms are produced." Carpenter, Human Physiology, page 335, assumes as a fact that there is a constitutional state of abnormal nutrition which causes stru-

mous and tubercular disease; and in a note to page 254, says, "The author is much disposed to agree with Dr. Handfield Jones in believing that a chronic fibroid degeneration resulting from the substitution of a lowly organized fibrous tissue for the proper texture of the part, may take place like tubercular generation, without the occurrence of inflammation properly so called." He thus recognises a constitutional cause, in opposition to those pathologists who regard inflammation as the only cause of tubercle. Wood, vol. 1, pages 114 and 115, says, "That in the present state of our knowledge the question, what is the nature of this affection denominated tubercular disease, and of which tubercle is a mere incident, cannot be fully answered." But he ascribes it to a "condition of the blood," and says, "we are thrown back upon some original vice of the constitution." After enumerating a number of causes which favor the development of tubercle, he goes on to say, that "there are many individuals upon whom all these causes may be made to operate, and so intensely as to produce death, without giving rise to this particular disease." His train of reasoning is remarkably lucid and satisfactory.

Can this "original vice," "taint," "poison" or "disposition be so eradicated, as either to prevent, or greatly lessen the probability of its hereditary transmission, and prevent to a great degree its development in those in whom this predisposition exists? To satisfactorily solve these problems, requires a more thorough knowledge of therapeutics and pathology than I can lay claim to; but, believing that God has never permitted any evil, either physical or moral, to exist without a corresponding remedy, I am led to the belief, that even the tubercular diathesis may be eradicated. I must so far beg the question as to take for granted, that the strumous and tubercular diatheses are essentially one, having different manifestations, and that they are caused by a taint or poison in the system. Paget, Surg. Pathology, page 669, has a long and lucid article on this subject, in which he doubts the actual identity of scrofula and tubercular disease, yet admits that the tubercular form is generally dependent on the strumous diathesis. His article being long, I will not attempt to quote his words, but beg of those interested

in the question, to examine his article carefully, and see the general bearing it has on the subject now under consideration. Paget, Wood, Horner and almost all other writers consider tubercular disease as one of debility. Paget, page 667, says "this general state of the constitution, whether natural, or artificially generated, is fairly expressed by such terms as "delicacy of constitution, general debility, defective vital power, irritability without strength." We know that the red corpuscles of the blood are notably diminished, and emaciation to a greater or less degree is a prominent symptom. If then, the disease be one of debility, and having for its origin an occult poison; we are prepared for the questions—can it be eradicated? and by what means? Certain diseases are caused by a poison taken into the system. This poison is material, that it has individuality, and is not a mere state there can be no doubt. It is propagated by contact, by inhalation, which it could not be if it were a state or condition. So must the poison of tubercular disease be an entity. It is a something propagating itself—by all if you please.

I cannot conceive of an entity, existing pathologically, and not physiologically, without at the same time conceiving of the possibility of its being destroyed and removed from the system. It is on the action of certain agents introduced into the system, in some cases so modifying the constitution as to make it incapable of being acted on by other agents, (as the vaccine virus) and in other cases neutralising poisons already existing in the system, and causing them to be eliminated—that I base the belief, that the tubercular tendency, may be so overcome in the young, and in those in whom it has not been fully developed, that in the one case it shall not be transmittable, and in the other, that its full development shall be prevented. Certain agents act on certain poisons as neutralisers. In struma and secondary syphilis, iodine acts as a specific, if I may be allowed to use the term; and if its use is persevered in, the poison is eradicated. Mercury is an antidote to syphilitic poison in its primary condition. Quinine is an antidote for the poison of intermittents. How these agents act, is beyond our present knowledge. Iodine and mercury, so far as we can understand, must act on the poi-

son itself, or as catalytics. Quinine may act in the same way, or it may act as a restorative, in the same way that iron does.

There are those who hold, that tuberculosis depends on a faulty formation; and point to the narrow and generally faulty form of the thorax of those thus predisposed. But I cannot agree with them, and am led to look on this faulty formation only as an *evidence* of the *predisposition*. The tubercular tendency cannot always be detected by form alone, however close the inspection, though it may be generally diagnosed by form, feature, color and texture of skin, eyes, hair, nails, etc.

In attempting to eradicate tubercular disease we have three indications for treatment. First, to neutralise and overcome the poison, or taint. Second, to expand the chest and restore the thorax to a healthy form. Third, to overcome the general debility, and give the requisite tonicity to the system: to these must be added a fourth, in those whom the disease has been developed, viz: to remove the morbid product or tubercular deposit. How shall we meet them? As this article is only meant to be suggestive, I will neither occupy your pages, or tax the patience of your readers, by more than a glance at this part of the subject.

If we admit the doctrine that "Strumous and tubercular diseases are either identical or nearly allied," we must be led to the belief, that the same class of medicines which are known to be efficacious in the one, will be also in the other. Those designed to meet the first indication, or remove the poison, must of course be hæmatics, and these again must be catalytics, for there is a special catalytic action for them to perform.—Allow me here to refer to "Headland on the action of medicines" article hæmatics, pages 191, 196, 199 and 211, for the arguments to prove that all hope of eradicating the tubercular poison, must rest on the action of catalytics. His article does not refer particularly to tubercular disease, but is on the *action* of catalytics. If his doctrines are true (and they are supported by sound reasoning and experience,) they cover this whole ground. In struma, iodine is the remedy most relied on, and its catalytic action is in this case its sole operation, and we are led to the conclusion that this and other agents, having the same ac-

tion, must, if any will, be beneficial in tubercular disease. The faults of form must be met by all those hygienic measures which tend to expand the thorax and give power to the respiratory muscles. The debility is to be overcome by exercise, pure air, nourishing diet and tonics, particularly chloride of sodium and iron. Here allow me to refer your readers to an article of mine which you did me the honor to publish in your journal for June last. The consideration of the fourth indication, or the removal of the morbid product, in the developed cases, I shall at present pass over.

I suggest to the profession, whether it is not possible to treat children and young persons, by such remedial and hygienic measures, as shall eradicate this tubercular tendency, whether it be hereditary or acquired, and lay the foundation for vigorous health? Cannot the causes of almost of universal prevalence consumption be removed? Physicians are the true conservators of the public health, and it is for them to look at these questions in all their bearings.

Schools, as they now exist, are the most fruitful nurseries of consumption. Crowded, stove-warmed, illy ventilated rooms, necessitate the breathing an atmosphere deprived of the most of its oxygen and loaded with effluvium, irritating the lungs and oppressing the brain. Cramped and uneasy positions while sitting, and lounging, careless attitudes while standing, combine to distort the spine and contract the thorax. To all this we must add the over stimulation of the brain and nervous system so prevalent in our higher schools, especially for females. Here we have a combination of causes sufficient to develop tubercular disease in every one having the least tendency to it. In Dr. Meigs' work on "Woman and her Diseases," in his celebrated conversation with "Miss Helen Blanque" the want of proper exercise and air is admirably pointed out; on page 367, he gives his own views, and those of Miss Catharine Beecher on the physical education of girls, and on page 377 will be found a most instructive article on the effect which an over mental stimulation will have on their health. True, Dr. Meigs is not speaking particularly of tubercular disease, but of the controlling effects over menstruation, yet we know that one of the most

fruitful sources of tuberculosis, is an abnormal arrest of the menstrua.

The same holds good in many instances with boys and young men. Look at the mass of students in our colleges, and particularly in our theological seminaries, and mark the proportion who give unmistakeable evidence of tubercular disease, and say to what else it can be ascribed, but the unhealthy and unnatural physical and mental training to which they are subjected. Are these things without a remedy? Is it not practicable to establish schools on such a system that they shall be under the supervision of medical men of high standing; and cannot schools be established in or near all our large cities, where those children may be placed who may be predisposed to consumption, educated, and at the same time treated for the vice of their constitutions? Such schools under the care of competent physicians would command the confidence of the public, and ensure that true, just, and judicious measures would be adopted. I am convinced that if such measures were adopted we should soon see their beneficial results. Will not our medical men give this subject the examination which its importance demands, and give us their views through the columns of your journal? It will not do to say, "It is visionary and cannot be accomplished." True it is as yet only theoretical, but *if the theory is correct, it is practicable*, for every truth can, and must be made available in human progress.

If this article should have the effect of drawing the attention of my medical brethren to the subject, I shall be satisfied, though they should demolish every position I have taken, believing as I do, that the truth and the right will eventually prevail.

ARTICLE III.—*Cases in Practice.* By E. K. Bowmam, M. D., of Rock Island.

CASE I.—OBSTETRICAL.

During the winter of 1848 and 49, known as the winter of the deep snow. I was called out of my bed to visit a woman in labor. The midwives, two of them had broken down. I had been exposed to intense cold all day and had had all the fingers on

both hands frozen—had only been home long enough to eat my supper, get to bed and get warm, when the messenger arrived. After thinking a moment to see if I could not get up some good excuse for declining, and failing to satisfy myself, I rolled out and waded my horse five miles through the drifted snow. I found the woman in terrific labor, all hands crying. Although nearly frozen I was importuned with startling vehemence not to lose a moment, accordingly I lost not a moment in making an examination, and found the childs head pressing tremendously against the external parts, but the exit from the vagina closed by a heavy septum one fourth of an inch thick and of cartilaginous firmness; a small aperture immediately under the meatus urinarius with difficulty admitted the point of the index finger. Dilatation was as impossible as with so much sole leather.—Shivering with cold worse than a man in ague, I was compelled to imbibe a cup of hot coffee, kindly held to my lips by a lady friend, while my hands were engaged in dilating efforts. Utterly failing in these efforts I determined to resort to the knife. After explaining to the husband and mother of the woman the danger of rupture of the perinæum from the sudden passage of the childs head under such powerful expulsive efforts, I resorted to the knife, and while the midwife held the candle, with one sweep of the probe pointed bistoury relieved the obstruction.—Supporting the perinæum, no injury was sustained by that part. The couple had lived together seven years quietly and apparently happy, in the vigor of youth but debarred by this barrier from sexual enjoyment. Modesty prevented them from confiding in any older person until *accidental* conception, and then bistoury forever demolished the formidable barrier. I have since delivered the woman of healthy children and no difficulty was found whatever.

CASE II.—DEFORMITY OF VAGINA FROM ULCERATION CAUSED BY INJURY DURING PARTURITION.

On the night of the 25th ult., I was called to see an obstetrical case in Mercer county, near Camp Creek. I went with great reluctance as the condition of the roads made them almost impassable, the night almost of pitchy darkness added to the

difficulties of the way. On arriving I found the woman in labor. A brother physician was present and had been in attendance most of the day, and had sent for me having encountered as he supposed more difficulty than he was willing to take the responsibility of attempting to solve alone. A careful examination disclosed the following condition of the parts: The meatus urinarius was dilated and tender from the forcible insertion of finger, the urine dribling away involuntarily, the sphincter from excessive dilation having lost its contractility. The vagina was closed from the superior commissure to the inferior by a thick firm cicatrix, save at the lower and left side, where an aperture was found so small that the woman told me she had been only able to introduce a common wooden pencil, and that caused pain and made the part bleed. The woman was married to her second husband, had had a child by her former husband, and injury by the midwife at the time of her first confinement, followed by inflammatory action, had caused the adhesion of the walls of the vagina. Under such circumstances she had married again. Of course the gate was effectually closed on all natural sexual communication with the second husband. Yet nature asserted her rights, and notwithsanding such an apparently impenetrable barrier had received the impregnating fluid and conception took place. The pains being regular and natural, I advised waiting until the head of the foetus emerging from the inferior straits of the pelvis should forcibly rest against the external parts. In about an hour this occurred (12 o'clock at night.) Then after placing the woman in convenient position, scalpel in hand, my brother acoucheur assisting with the light, I proceeded with every occurrence of the expulsive effort carefully to dissect longitudinally along the center of the line of the cicatrix, and ceasing to cut the moment the pain relaxed succeeded after cutting $\frac{3}{8}$ of an inch in depth $1\frac{1}{2}$ inches long in reaching the head of the foetus. Careful dilatation with the finger and support of the perinœum co-operating with the efforts of nature, accomplished delivery safely in a short time. The child was vigorous and large, and promises to do no discredit to the race of W—— Tell to which he belongs. This case proves conclusively that conception may take

place when the accomplishment of the sexual act is physically impossible.

CASE III.—POISONING BY STRYCHNINE.

In the summer of 1850, while eating my breakfast I was interrupted by a young man in great alarm, who wished my immediate presence at the sulphur springs, as a comrade had just taken quinine to break ague, set down to his breakfast and commenced to drink a cup of coffee: while drinking he fell over from the table in a terriffic fit as they called it. In a few minutes I was there, found the young man in a fearful spasm, the spine was curved backwards so as to resemble the concavity of a large hoop, the eyes staring and protuberant and muscles as rigid as iron. A moments observation flashed conviction through my mind that the subject before me was under the influence of strychnine. Acting on this decision I at once proceeded with the energy of desperation. I had nearly four ounces of ipecac in my pill bags, and at once gave him a teacup full of a mixture of it. I then set my scarrificator to its utmost depth and it having a powerful spring sent the 16 blades well home. I placed cups and common tumblers until I had the whole spine covered with them. Then drenched him with ipecac until I had given my whole supply yet no vomiting occurred—renewed the cups and resorted to tartar emetic, six grain doses, every ten or fifteen minutes. Plying the cups the spasms abated, he soon began to relax and presently heaved "like a dog with a bone in this throat." I kept him puking until bilious matter was ejected freely, and using so much warm water as to ensure a very clean condition of the unfortunate organ if water would do any good. When no more bilious matter was ejected I desisted Then returned home and procured some iodide of iron and gave him of that, having seen it recommended as being nearer an antidote for that terrific poison strychnine than anything else known. He slowly regained his health and the ague was about as effectually broken up as I ever saw it done. I will here state the manner in which the accident occurred. When the family moved into the house they found a common, long, one ounce vial, having about as much of a light white powder in it as would equal in bulk ten grains of old quinine. It was

brought out into the road to me one day to know if it was not quinine, carelessly looking at it, knowing that the family that had been living there before, had had ague and treated themselves for it, I supposed it quinine and replied I guessed it was —not dreaming of finding strychnine in such quantity and in such a bottle and no label on it. The mistake was natural, but I then for the first and last time, deviated from my rule always to advise all old medicines to be committed to the flames.

PROCEEDINGS OF MEDICAL SOCIETIES.

Meeting of the Rock Island County Medical Society.

Pursuant to notice, the first quarterly meeting of the society was held at the office of Drs. Truesdale and Knox, Dr. Calvin Truesdale presiding.

A larger number of members were present than at any previous meeting; and the number was increased by a delegation from the Scott County Medical Society.

After the reading and approval of the minutes of last meeting, the committee appointed to confer with the Davenport Medical Society, with reference to union meetings, reported that arrangements had been made by which members of one society were to be received as honorary members of the other. On motion, the committee's report was adopted, when the following named gentlemen were admitted as members of the Rock Island Medical Society, without the privilege of ballot:

Drs. Thomas J. Saunders; J. W. H. Baker; Lewis F. Pelton, and W. M. Line, all of Scott County Medical Society.

Dr. O. P. S. Plummer, of Moline, was introduced, and admitted to membership.

Dr. P. Gregg, late president of the society was called out, and after expressing regrets that he was unable to be present at the annual meeting, proceeded to deliver his address prepared for that occasion. At the close of his reading, several members took occasion to make complimentary remarks for the enjoyment the address had afforded them, after which, as expres-

sive of its approbation of the same, the society adopted the following:

Resolved, That our late president, Dr. P. Gregg, is entitled to our thanks for his highly profitable and interesting address; that a committee of three be appointed by the chair, to request a copy of the same for publication, to be preserved with the constitution and by-laws, as the annual address of the president of the first medical society organized in Rock Island County, Illinois.

Drs. Sam. K. Sharpe, W. A. Knox and J. R. Hayes were named as such committee.

Having been appointed to write a dissertation, for the present meeting, Dr. Sharpe read a learned and interesting article on the diagnosis, cause and treatment of *menorrhagia*, for which the society adopted a vote of thanks.

Dr. M. H. Carpster was appointed as essayist for the semi-annual meeting, when Dr. Gregg moved that further business be deferred to a more convenient season, as the hour was near at hand, when he hoped to meet the professional brethren present, at his residence and dinner table; suggesting, moreover, that a carriage was in waiting to convey the company to the point proposed, and he trusted that members of the society would lose as little time as possible, but jump into the omnibus "and all take a ride." A proposition, at once so reasonable and disinterested, no one seemed inclined to oppose, and the society accordingly adjourned, to meet, in "*omnibus.*"

W. F. CADY, Secretary.

Report of Representatives from Rock Island Medical Society on the Proceedings of the State Medical Society. By E. K. BOWMAN.

Your representatives, elected to represent this Society in the State Medical Society, which held its sessions at Chicago on the 2d, 3d and 4th days of June, have to report that, at the time appointed, they repaired to the place indicated, and took such part in the proceedings as seemed necessary. Finding that Rock Island had never been represented in the State organization, we were not slow to perceive that we were rather regarded as from the unenlightened districts, where medical

science had but a slender number of votaries. However, we were duly encouraged by the expressions of pleasure, at the evidence afforded by our presence, that some interest was awakened in our region. The sum of our conclusions did not entirely overwhelm self-esteem, nor force on us the overshadowing conviction that the State Society combined *all* the wisdom and science of the State. We thought it valuable, however, as a bond of union for the profession and the medical organizations of the counties. The discussions on various papers, if not profound, were suggestive and useful, giving the various kinds of treatment in different hands and localities. A paper read by Dr. Bailey, of Joliet, on Congestive Intermittents elicited considerable discussion, but your representatives were not able, giving vigilant attention, to discover any new truth, either in cause, pathology or treatment, developed by the paper or discussion. A paper was read by Dr. Goodbrake, of Clinton, on the medical properties of Asclepias Tuberosa, giving an account of several cases in which, as he supposed, it was successful in bowel complaints, but always (if I observed correctly) while in the administration of other and appropriate remedies. It seemed to your representatives, from the great volume of decoction of the root used, that its main value consisted in determining to the skin, and that any warm diluent or demulcent that does not offend the stomach will probably accomplish as much. We were not converted to such strong faith in Asclepias Tuberosa, that, if the life of a child were in danger, we would feel safe in relying on it as a sufficient resource. Indeed, in encountering this formidable scourge in July, August and September, we need to be armed with all the accuracy of judgment which science, skill and experience can give, and have at our command all the most reliable agents with which nature and art have furnished us.

Dr. Brainard addressed the Society on the subject of ununited fractures, giving his views of treatment and the most efficient means of effecting a cure. You are probably aware that his treatment consists in perforating through the soft parts with an instrument somewhat resembling a trochar, and wounding the broken surfaces so as to excite the secretion of bone, withdraw-

ing the instrument so as not to admit the air, and avoiding such damage to soft parts, if possible, as to obviate any danger of suppuration. The plan adopted by Dr. B. probably will be more successful than any heretofore put in practice.

A paper was presented, (ostensibly by the Esculapian Society, located in the south-eastern part of the State,) and read by the author, on the subject of Stomatitis Materni. The most prominent idea which struck your representative, was, that the disease was becoming alarmingly prevalent in our country. The only cause assigned for the assumed fact was the commingling of races, which is going on so extensively on our continent, from foreign emigration. No reasons, physiological, climatic or otherwise was given why amalgamation of races should develope such a distressing affection as Stomatitis Materni. The treatment, as given by the author of the paper, consisted almost wholly in giving, after each meal, large portions of sub. nitrate of bismuth and carb. soda, in combination.

The discussion on this paper was quite interesting. Prof. Blaney made quite an address, giving his views, which were that the disease was caused by the loss of albumen from the maternal system to furnish material for the growth of the child. His remedy, to feed patients on such diet as would furnish the most albumen, to wit: eggs, milk, etc.

Professor Davis, who, by the way, impressed your representatives as a man of thorough research, gave his views at some length, and detailed some cases which had fallen under his care. He had not been able to find specifics, nor control his cases with the ease and promptness which was desirable, and would be accomplished if specifics were attainable.

Your representative thinks, on retrospection, that the influence of malaria, acting on delicate and sensitive mucous and nervous organizations, in combination with pregnancy and lactation, was overlooked, and that no treatment will be so efficacious where this element is overlooked as where its agency is attentively considered. This reflection is caused by a recollection of two cases occurring in my own practice, one of which was treated by local applications mainly, and only with temporary relief; the other, with the idea mentioned above, was

treated constitutionally with entire success and without any local treatment whatever.

The subject of croup was also up for discussion, yet with all the anxiety to attain complete control, all who spoke confessed that they knew no infalliable treatment, except one man. His advice was to put croup into the category of subjects exclusively under the control of the old women and apply simply water to the throat, then the profession would not see so many fatal cases. The verdancy and self-complacency precluded any suspicion of the honesty of the recommendation. Prof. Davis recommended the yellow sulphate of mercury (turpeth mineral,) as the most reliable emetic known in croup, combining the advantages of emetic and mercurial.

An invitation having been extended to the society to visit Mercy Hospital, which is under the care of the Sisters of Charity, we repaired to the hospital at the hour appointed, and made the tour of the wards accompanied by Prof. Davis whose remarks on the pathology and treatment of the various cases, confirmed our previous impressions concerning him, and contributed much to the interest and pleasure of the visit. Several very interesting surgical cases under the care of Prof. Johnson, were also brought to our notice. A partial report on drugs and medicines was made by Prof. Johnson bringing to our notice the discoveries made within the year in that department. The most important and practical that we recollect were the solvent properties of glycerine and its value as a vehicle for the solution and administration of the vegetable alkaloids. On the whole, one noticeable feature presented itself to the mind of your reporter. It was this, that two very separate and distinct classes of men were represented in the society from the ranks of the profession. One of these seem, to the observer, to be active in moving the machinery, ready with remarks on all occasions, in season or out of season, whether having anything to say or not, more anxious to "figure in the transactions," than possessed of ability to make a creditable figure there. More desirous of notoriety than possessed of patience and toil, to achieve it by delving in the mine of truth, and illuminating themselves and others by its brilliant gems. Much to be compared are

they, to the venerable hen, that with large ambition, endeavored to spread herself over thirty-two eggs. No large product of vitality was the result, but on the contrary, considerable embryo vitality extinguished. On the other hand, we found men whose ring gave back the sound of the true metal, men, who, with an exalted conception of their glorious, yet much abused profession, are manfully endeavoring to advance and elevate it. Men of toil and research, patient and observing, who take more delight in the evolution of a new truth from the great storehouse of nature, or the practical application of a truth already discovered, than in all the figurings which could be made in all the volumes of all the societies.

Rockford was chosen as the next place of meeting of the society. Your reporter tried somewhat to get Rock Island as the place, and while making out as we thought a good case, yet the majority thought the claims of Rockford stronger, and so decided.

SELECTIONS.

Dr. Edward Brown-Sequard's Experimental and Clinical Researches, applied to Physiology and Pathology.

EPILEPSY—(Continued).

A slight increase of reflex excitability is not sufficient alone for the production of epileptic seizures. It often coincides with great weakness, as is the case in old people, in convalescents, and in persons who have lost a great deal of blood. In all these cases, reflex movements take place easily under the influence of emotions, fright, or even a sudden noise. Many excitable, though healthy men and women have reflex spasms in the act of coition—hence the name given to this act by Sennert, *epilepsivbrevis.*

It is very probable that the reflex excitability, or the reflex force, of the nervous centres is extremely considerable in those persons who have fits of epilepsy for the first time, caused by a slight blow, or some ordinary moral excitement.

We shall not examine what are the parts of the cerebro-spinal axis in which there is an increase of reflex excitability, because what we have said above of the seat of epilepsy shows what are these parts, their seat being nothing but that of the increased reflex excitability, or, in other words, epilepsy con-

sisting chiefly in that increased excitability. If it were proved that epilepsy sometimes exists only because the force of the reflex property is increased, its excitability being normal, we should have to admit that the seat of epilepsy is in almost the whole length of the cerebro-spinal axis, because, as we intend showing elsewhere, the force of the reflex property increases or decreases everywhere at the same time.

We must say, that although we admit that fits of epilepsy depend ordinarily on an increased reflex excitability, frequently combined with the existence of some special kind of irritation originating in the skin, in the mucous membranes, etc., we admit as *possible*, that without any increase of excitability, certain irritations on some parts of the encephalon may produce fits of epilepsy. We well know that the least puncture with a needle or pin of the *processus cerebelli ad pontem*, and, as I have found, of the auditory nerve, and of certain parts of the medulla oblongata, in mammals, is sufficient to produce fits of a peculiar kind of epilepsy, in which the animal rotates around the longitudinal axis of its body, in consequence of the convulsions. In man this kind of epilepsy has been frequently observed, and as the phenomena are the same as in animals (except as regards the duration of the fit, which in man is short, while in animals it lasts *usually* as long as life), it may be that the rotary convulsions have been produced, although there was no increased reflex excitability, in man as it is in animals.

Many discussions have taken place among physicians concerning the first phenomenon of a fit of epilepsy. We are, however, yet to know which of the epileptic phenomena is most frequently the first. Is it the paleness of the face, as Prof. Trousseau and others believe? Is it a spasm of the larynx, as was admitted by Dr. Marshall Hall? Or is it the loss of consciousness? We think there is no doubt that either of these phenomena may be the first, but we do not know which is most commonly the first. They may take place at the same time, and in some cases they may be entirely missing, or exist only after other phenomena.

Among the most interesting of these, ordinarily first phenomena, is the paleness of the face. Delasiauve (*Loco cit.*, pp. 56, 60, 66 and 77), considers it as extremely frequent in all kinds of attacks, from the simple slight absence of mind to the most complete epileptic seizure. Trousseau and Bland Radcliff (*London Medical Times and Gazette*, March, 1856, p. 303–304), are inclined to consider it as a constant symptom, and also as the first one. This paleness has not been explained. We consider it as a most interesting symptom, as it leads to a

very probable explanation of the loss of consciousness in epilepsy. After Prof. Claude Bernard had discovered that the section of the cervical sympathetic nerve is followed by a dilation of the bloodvessels of the face, I found that when this nerve is irritated by galvanism there is a contraction of these bloodvessels, and I explained the facts discovered by the eminent French physiologist and by myself, by considering the sympathetic as the motor nerve of the bloodvessels of the face. I found, also, that the branches of the sympathetic nerve which animate the bloodvessels of the face, originate from the spinal cord with the branches of the same nerve going to the iris.—(See my *Exper. Researches in Physiol. and Pathol.* 1853, pages 9–10, and p. 75; and the *Medical Examiner*, Aug., 1852, p. 489.) The theory I then proposed has been almost universally admitted. We have in this theory an easy means of explanation of the paleness of the face in epilepsy. When the excitation takes place in the spinal chord and the basis of the encephalon, which gives rise to the fit, the nerve-fibres which go to the head are irritated, and produce a contraction of the bloodvessels. Of course this contraction expels the blood, and, in consequence, the face becomes pale. Very often another effect, depending on the nerve-fibres of the cervical sympathetic, is produced—the dilation of the pupil. But the reverse sometimes takes place—a contraction of the pupil occurring, instead of a dilation. This last phenomenon is easily explained by admitting that the excitation of the nervous centres takes place near the origin of the third and fifth pairs of nerves, and not of that of the cervical sympathetic, as is the case when the pupil dilates. The paleness of the face, and the dilation of the pupil (when it exists,) soon disappear, chiefly in consequence of the obstacle to the venous circulation in the head, and of the state of asphyxia. The cause of the obstacle to the return of blood from the head is not only the contraction of the muscles of the neck, as Dr. Marshall Hall seems to think, but also in the state of the chest. Dr. Russell Reynolds (*Diagnosis of Diseases of the Brain, etc.*, 1855, p. 176,) says that he has observed in many cases in which the muscles of the neck were quite flaccid, notwithstanding the darkness of the face, and the leaden hue of the body generally.

Among one of the first symptoms of the fit, and as a cause of the cry, there is a spasm of the laryngeal muscles, and a contraction of the expiratory muscles. This contracted state of the chest acts on the heart so as to diminish the force of its beatings, as is the case in the experiment of compressing the chest, made by E. Webber and others, and it acts on the veins,

in preventing the circulation in them. Although compressed, and unable to beat freely, the heart quickly recovers an apparently great strength; the blood, losing its oxygen and becoming black, acts as a powerful irritant upon the central organ of circulation, so that palpitations, sometimes very violent, occur. Nevertheless, the pulse often remains weak, because the quantity of blood sent to the arteries by the heart is smaller than usual, on account of the obstacle to venous circulation.

We think that at nearly the same time, when the origin of the branches of the sympathetic nerve going to the bloodvessels of the face receive an irritation in the beginning of a fit of epilepsy, the origin of the branches of the same and of other nerves, going to the bloodvessels of the brain proper, also receive an irritation. A contraction then occurs in these bloodvessels, and particularly in the small arteries. This contraction expelling the blood, the brain proper loses at once its functions, just as it does in a complete syncope. Now, as it has been well proved by the researches of Kellie, of Abercrombie, of John Reid, of Henle and of Foltz, that the quantity of liquid in the cranio-spinal cavity cannot change suddenly, it results, that if there is less blood in tho brain proper there must be more in the basis of the encephalon and in the spinal cord. In consequence of the impediment of respiration, the blood sent to the encephalon, as well as to other parts of the body, contains but little oxygen, and is charged with carbonic acid, so that the large quantity of blood accumulated in the basis of the encephalon (the medulla oblongata, the pons Varolii, the tubercular quadrigemina, etc.,) and in the spinal cord, is endowed in a high degree with the power which I have shown that such blood posesses, *i. e.*, to excite convulsions. It may be as Henle has supposed, that the basis of the encephalon is then excited to cause convulsions in consequence of the pressure exerted upon it by the accumulation of blood. The spinal cord, also, in all its length, is then excited to produce convulsions by the blood which circulates in it. The grounds on which I base these views are the following.

1st. There is, in the beginning of a complete fit of epilepsy, an irritation of the parts of the nervous centres from which originate the nerve-fibres of the bloodvessels of the brain, and therefore there ought to be a contraction of these vessels. The cervical sympathetic nerve contains not only the nerve-fibres which cause a dilation of the pupil, and those which produce the contraction of the bloodvessels of the face in the beginning of a fit, but also the nerve-fibres of the bloodvessels of the brain.—Prof. Claude Bernard (*Memoires de la Soc. de Biologie*, for

1853, p. 94) has found that when the cervical sympathetic nerve is divided on one side, the temperature of the brain is increased in the corresponding side. We have shown that this elevation of temperature depends on the circulation of a larger amount of blood, which is the consequence of the paralysis of the bloodvessels, due to the section of their nerve-fibres. Some experiments of Donders, and his pupil, Van der Beke Callenfells, have also shown the influence of the sympathetic on the arteries of the pia mater (see Donder's *Physiologie des Menschen* Leipsic, 1856, p. 138 and 140;) they have seen these arteries contract when the sympathetic was irritated.

2d. We have said that we consider as reflex the convulsions of epilepsy, whether they depend on centric or excentric excitations. The contraction of the bloodvessels of the brain and face in a fit of epilepsy are also reflex. We have proved elsewhere (see my *Exper. Researches in Physiol. and Pathol.*, 1853, p. 34) that bloodvessels may contract by a reflex action, as well as muscles. In experiments with our distinguished friend Dr. Tholozan, Professor at the Military Medical School of Paris, we have found that the bloodvessels of one hand contract, by a reflex action, when the sensitive nerves of the other hand are irritated by being exposed to the influence of water at the freezing point. Schiff (*Comptes Rendus de l'Acad. des Sciences*, vol. xxxix., 1854, p. 509.) Donders (*loc cit.*, p. 139,) myself and more recently M. Vulpian (*Gaz. Med. de Paris*, 1857, p. 18,) have found that the bloodvessels of the ear in rabbits contract by reflex action, when the central part of the divided auricular nerve is irritated. I have found, besides, that the splanchnic nerves and other branches of the sympathetic have a reflex action of the bloodvessels of the heart. (See my paper, *Recherches Experim. sur la Physiol. et la Pathol. des Capsules surrenales*, 1856, p. 30.) All these facts establish beyond doubt that the bloodvessels as well as muscles of animal life may contract by a reflex action. In a seizure of epilepsy, therefore, the bloodvessels of the brain proper, those of the face, the muscles of the neck, of the larynx, etc., may contract by a reflex action, either separately or at the same time.

3d. To say that an explanation is a good one because we do not know or because we cannot imagine any other one, is an argument which rarely has any value; but when the explanation is not only possible, but also rendered very probable, as is the case with our theory of the loss of consciousness in epilepsy, it is an argument of a positive value that no other theory, except one or two having many facts against them, has been proposed heretofore.

4th. It might be objected to the explanation we propose, that the loss of consciousness is too rapid to be due to a contraction of bloodvessels. There is a fact which answers peremptorily this objection; it is, that when the cervical sympathetic is irritated by a powerful electro-magnetic current, the contraction of the bloodvessels of the face, and particularly of those of the ear, is almost immediate, and so considerable that many of the small arteries seem to expel completely their contents. Now, as everybody knows that even a diminution in the supply of blood to the head, as in ordinary syncope, is sufficient to produce an immediate loss of consciousness, *a fortiori* is it so if the nerve-fibres, irritated in the nervous centres, produce a contraction in the bloodvessels of the brain proper.

5th. As we see that the bloodvessels of the face, after a contraction of very short duration, dilate and become turgid, it might be asked if it be not so with the bloodvessels of the brain proper, and why, in that case there is no return of consciousness when the blood returns in the dilating bloodvessels. We answer that it is probable that the cerebral bloodvessels dilate, like those of the face; but that when this dilation takes place, the blood which then reaches the brain does not contain oxygen enough, and is charged with too much carbonic acid, to be able to regenerate the lost function of this organ. It is only when the respiration has become almost completely free, that the functions of the brain re-appear.

6th. It might be objected, also, that the theory does not explain why the nerve-fibres going to the bloodvessels of the brain proper are excited, while those of the bloodvessels of the base of the encephalon are not. The theory has not to explain this difference; *it is a fact* that the action of the brain proper i lost, while the action of the basis of the encephalon is very much increase d, during a fit of epilepsy; and all that the theory has to do is to explain the loss of action in one part, and the cause of increased action in another. However, we may add that if the bloodvessels of the base of the encephalon are not excited to contract, it is, according to all probability, because their nerves originate in another place from those of the cerebral bloodvessels; and as we know that the nerves going to certain muscles are excited in the beginning of a fit, while others are not, we may understand easily that the same thing exists for the nerves of the various encephalic bloodvessels.

7th. As regards the influence of blood charged with carbonic acid on the nervous centres, we will refer to our often-quoted work (p. 80, and p. 101–124;) and we will merely say here that we have found that the injection of blood charged with

carbonic acid into the carotid or into the vertebral arteries, at once causes epileptiform convulsions.

8th. It might be objected that the bloodvessels of the base of the encephalon and of the spinal cord ought to be excited to contract by two causes after the fit has lasted some time; the first cause being the excitation of all the parts of the cerebro-spinal axis in which there is blood charged with carbonic acid, and, consequently, the excitation of the nerves of the bloodvessels of the basis of the encephalon, because these nerves take their origin somewhere in those excited parts of the cerebro-spinal axis; the second cause being the direct excitation of the smooth muscular fibres of the bloodvessels of the encephalon by the blood charged with carbonic acid. Now if the bloodvessels contract, whether it is on account of the first or of the second cause, or of both, it seems that the fit ought to be diminished at once. But in the first place, it is probable that the bloodvessels contract irregularly, some at one time, some at another. In the second place, blood charged with carbonic acid, after its first action (which is an excitation) has a secondary action, which causes the loss of the contractility of the muscular layer of the bloodvessels. In the third place, the obstacle to the return of venous blood may cause the bloodvessels to dilate to such an extent that they cannot contract, as is the case with the heart when its cavities are too full.

Prof. Gibson and Mr. Crawford, the Sculptor.

In the August number of the *Medical News and Library* we find a long letter from Prof. Gibson, detailing the history of his connection with the case of Mr. Crawford, the sculptor. We regret that Prof. Gibson has felt it necessary to make this defence, but all professional men will certainly regard it as full and satisfactory. It is probably known to most of our readers that Mr. Crawford, one of our distinguished American sculptors, has been laboring for a year past with a tumor in the orbit of the eye, which the ablest surgeons of Europe pronounce *malignant* in its character. Prof. Gibson, late of the University of Pennsylvania, being on a visit to Rome last winter, was requested by Dr. Smyth, the attending physician of Mr. Crawford, to examine the case and give the benefit of his advice. Before doing so Prof. Gibson explained that he had withdrawn from professional duties entirely and "did not wish to engage in any case whatever"—but as a friend and countryman he was willing to attend with Dr. Smyth, and while he remained in Rome to do everything in his power to serve Mr. Crawford,

but that his services must be gratuitous. Says Dr. Gibson in his letter—"after minute examination and inquiry into the nature of the case, I remarked to Dr. Smyth—'it is evident that the eye, perfectly sound in itself, but pushed forward beyond the walls of the orbit more than half an inch, is acted upon by *pressure* from behind from a fluid or solid—that if from the former, an *exploring needle* might by discharging it cause the eye to resume its natural position, and be followed by a cure—that if on the contrary, *solid*, and, particularly, if of *malignant* character, no essential benefit can result from any treatment whatever, and that the case must, *necessarily*, in a few months terminate *fatally*.' Having obtained Mr. Crawford's consent to the use of the *exploring needle*, and being requested by Dr. Smyth to perform the operation, I engaged in it the next day, with every precaution and with the utmost delicacy, and in a few minutes was able to ascertain, with the utmost accuracy, that there was *no fluid*, but a *solid* tumor, which not only filled up the posterior part of the orbit, but might possibly have its origin in the brain."

As Prof. Gibson had anticipated and foretold, the tumor continued to develop rapidly—after which Mr. Crawford was sent to Paris, and received the attentions of the most eminent men there. Sometime in April, however, Mrs. Crawford wrote a letter to her friends in this country, which was published in the New York *Evening Post*, and wherein she expressly attributes the aggravation of Mr. Crawford's condition to the exploring operation by Prof. Gibson. All the circumstances of the case, certainly, render the letter of Mrs. Crawford, to say the least, very thoughtless and uncalled for. It is to this charge that Prof. Gibson especially designs to reply in the letter before us. This is a form of infliction to which the profession is much too frequently subjected—a family receives the benefit of the most careful, most reliable, most painfully matured advice and professional attentions—and yet if despite all the resources of our art the case proves unfortunate, the friends allow themselves to make disparaging remarks of the attendants, or, as in this case, assume to set up a non-professional opinion, in a case too where they cannot properly have any claim to capacity for giving an opinion of any worth, yet, we say, setting up this non-professional opinion to blast, so far as it may, the life-wrought reputation of the conscientious, skilful medical adviser. This evil is grossly unjust to the medical man, and eventually must in a great measure re-act unhappily to the interests of the community. Prof. Gibson has fortified himself with the opinions of Velpeau, Nelaton, Desmarres and Sichel,

all confirming the views of Gibson in his diagnosis of the case, and heartily approving his operation with the *exploring needle* as every way proper in this case, and one of daily employment in doubtful cases of this character.—*Cin. Med. Observer.*

Fiske Medical Prize Questions.

The Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held at Providence, June 3, 1857, announced that the premium of one hundred dollars offered by them in 1857, for the best dissertation on the following subject:

"What are the causes and nature of that disease incident to pregnancy and lactation, characterized by inflammation and ulceration of the mouth and fauces, usually accompanied by anorexia, emaciation and diarrhœa, and what is the best mode of treatment?" has been awarded to the author of the dissertation bearing this motto:

"Wheat from the fields of science and cockles from my own farm."

And upon breaking the seal of the accompanying packet they learned that the successful competitor was David Hutchinson, M. D., of Mooresville, Morgan county, Indiana.

They propose the following subjects for 1858:

1st. The effects of the use of alcoholic liquors on tubercular disease, or in constitutions predisposed to such disease.

To be supported by facts presented as far as possible in a statistical form.

2d. The morbid effects of retention in the blood of the elements of the urinary secretions.

For the best dissertation on each of these subjects the Trustees will pay one hundred dollars.

Every competitor for a premium is expected to conform to the following regulations, viz:

To forward to the Secretary of the Trustees, on or before the first day of May, 1858, free of all expense, a copy of his dissertation, with a motto written thereupon, and also accompanying a sealed packet, having the same motto inscribed upon the outside, and his name and place of residence within.

Previously to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title and interest in and to the same, for the use, benefit and behoof of the Fiske Fund.

Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees, unopened, and the dissertations may

be procured by their respective authors, if application be made therefor within three months.

ISAAC RAY, M. D., Providence,
JAS. H. ELDRIDGE, M. D., E. Greenwich, } Trustees.
CHAS. W. PARSONS, M. D., Providence,
S. AUG. ARNOLD, M. D., Providence, Sec'y.

BOOK NOTICES.

Manual of Physiology. By William Senhouse Kirkes, M. D., Fellow of the Royal College of Physicians, etc., etc. A new and Revised American from the last London Edition, with two hundred Illustrations. Blanchard and Lea, Philadelphia, 1857.

This is a new edition of a work already pretty well known to the profession. It is neatly printed and substantially bound, containing 584 pages, and very well illustrated with wood cuts. Without any of the fulness and completeness presented by the works of Carpenter, and Todd, and Bowman, this is, nevertheless, a well digested and useful manual, which will be found very convenient both by the student and practitioner.

Principles of Medicine. An elementary view of the Causes, Nature, Treatment, Diagnosis and Prognosis of Disease; with brief remarks on Hygienics or the Preservation of Health. By Charles J. B. Williams, M. D., F. R. S. A new American from the third and revised London Edition. Blanchard and Lea, Philadelphia, 1857.

Former editions of this work have been several years in the hands of the profession, and are too generally known and appreciated to require an extended notice of the present issue. The volume before us contains about 500 octavo pages. In our estimation it is decidedly the best work on general Pathology to which the student can have access at the present time.

The analytical method of investigation pursued by the author in the preparation of this work, adds greatly to its value. It is the only true and rational method of studying disease, and

we only regret that several important subjects are altogether omitted from this as well as from former editions of the work.

Quinine in Fever. By Isaac Casselberry, M. D., of Evansville, Indiana.

This is a pamphlet of 13 pages, reprinted from the Cincinnati *Medical Observer*. The writer says: "The first pathological state in the incipiency of fever is a lesion of automatic innervation, which produces a lesion of secretion and nutrition. The effete elements of the food and the transformed tissues are retained in the blood; both nutrition and secretion are decreased or perverted." Quinine he regards not as a stimulant in the same sense that we regard alcohol or the various fermented and distilled liquids, but an agent peculiarly adapted to increase and sustain the function of the *automatic* nervous system, and thereby counteract or remove the primary pathological lesion in febrile diseases, The article is well written and interesting, but the ideas contained in it can scarcely be regarded as new or original.

The Use of Water in the Treatment of Fever. By Isaac Casselberry, M. D., of Evansville, Ind.

This is a pamphlet of 21 pages, reprinted from the *American Journal of Medical Sciences*. The writer occupies the first half of it in considering the functions of the skin, lungs, etc., as a basis for explaining the action of water upon the system, whether used internally or externally. The pamphlet is worthy of a careful perusal.

Remarks on Fractures of the Scapula, with cases presenting striking peculiarities; read before the Medical Society of the State of Georgia, April, 1857. By L. A. Dugas, M. D., and Professor of Surgery.

This is a well written and interesting monograph of 22 pages, and to the surgeon especially it will well repay for a careful perusal.

EDITORIAL.

Medical Education.

We are gratified to see that this subject is, at the present time, receiving much attention from our brethren of the medical press. It has for some months past occupied a prominent place in the columns of the *North American Medico-Chirurgical Review*; the *Medical Gazette*, of New York; the *Stethescope*, of Richmond, Va.; the *Medical and Surgical Reporter*, of N. J.; both the New Orleans Medical Journals; the *Southern Journal of Medical and Physical Sciences*; the *Nashville Journal*; the *Medical Observer*, of Cincinnati; the *Medical Independent*, of Detroit, and some others. Nearly all the writers on this subject advocate three leading ideas, viz: 1st, A more extended and reasonable degree of preliminary education for the student before he enters upon the study of medicine. 2d, Longer College terms, so as to admit of more complete instruction in the various departments. 3d, The adoption of more systematic and extensive arrangements for clinical instruction.

The views of the editor of this journal, in relation to all these topics, have been before the profession several years, and may be found fully expressed in the last chapter of the small volume entitled "A History of Medical Education and Institutions in the United States," and also in the more recent work entitled "A History of the American Medical Association."

We have, in both of the above named works, in the columns of this journal, and on all other suitable occasions, advocated each of the before named propositions. The first, we regard as the primary step, absolutely essential, as the only basis for real advancement in all other respects. But this matter of preliminary education belongs emphatically to the profession at large, and not to the schools. The proper standard of preliminary education must be exacted as the first initiatory step when the young man applies to the practitioner for admission into his office as a student of medicine. This was the position assumed by the American Medical Association on the first completion of

its organization in 1847; and, two years after, it went further, and distinctly recommended that each County or local Society adopt such regulations as will prohibit its members from receiving any students into their offices until they exhibit ample proof that they possess the requisite knowledge of the ordinary branches of science. Some of the recent writers on this subject have recommended that the National Association refuse to receive delegates from all such Medical Colleges as do not fully comply with the regulations it may adopt.

When this is done, we shall move that the Association also refuse to receive delegates from all such State, County and local Societies, as do not effectually prohibit their members from receiving as medical students, young men whose preliminary education is grossly defective.

In regard to the second proposition, that of lengthening the College term, we are more fully satisfied with each additional year's experience, that no more extension of the College terms to five or six months will accomplish any of the important objects desired. Our brethren who desire to see the present system of College instruction improved, must remember that the entire want of method, or in other words, the custom of lecturing on all the branches of medicine to the same classes on the same day, is quite as great an evil as the want of time in a four month's term. To make any substantial improvement we must extend the present College term to a Collegiate year of nine or ten months, and divide it into two or three subdivisions or minor terms, so that a limited number of branches or departments of Medical Science may be taught in each. By judiciously grouping the several subjects, each minor division of the Collegiate year would present such topics as are suited to the student at each successive year of his advancement.

He would thus be able to pursue the several branches in their natural order and relation to each other, attending such division of the general College term each year as corresponded with his progress in study. This would reduce the study of medicine to a methodical and well digested system; and we should no longer witness the absurd practice of lecturing to young men on the details of practical medicine and surgery before they

had studied long enough to become familiar with the bones of the skeleton or the technical language of the Materia Medica. We have advocated this change for several years, not merely in the two published volumes mentioned above, but in the columns of this journal, and also in the lecture room of the College with which we are connected; and we were very much gratified to see it taken up and distinctly advocated in the pages of so influential a journal as the *North American Medico-Chirurgical Review*. In relation to the third proposition, calling for a more systematic and extensive system of clinical instruction, we think there are indications of genuine progress. These indications are not only visible in the action of the several State and National organizations, and the discussions of the medical journals, but also in the action of such Colleges as have heretofore omitted to provide any facilities for this kind of instruction. Even the Medical Department of the Michigan University has been compelled to change its tactics, and actually get up some *show* of clinical instruction, by inviting its students to a summer course in the hospital at Detroit. We say *inviting*, because it has not yet come up to the standard adopted several years since by the best schools in the Union, and made attendance on a course of Hospital Clinical Instruction one of the requisitions for graduation. We are glad, however, to see even the smallest indications of progress in this important department of medical education. It is now seven years since the Rush Medical College with which we are connected, adopted a rule making attendance upon at least one course of Hospital Clinical Instruction a requisition for graduation. The Mercy Hospital, to the wards of which we have unrestrained access, always contains a number of patients, both medical and surgical, greater than can be profitably used for clinical purposes.

The regular course of instruction is commenced on the first Monday in October in each year, and an hour is devoted to the class in the wards, every morning (Sundays excepted) from that time to the 1st of March. From the last named date to the 1st of July clinical instruction is continued three mornings in the week: thus giving all those who take the hospital ticket the privilege of clinical instruction nine months of the year. We

cheerfully invite, to this department of our College facilities, the closest scrutiny of the profession.

A New Pathy.

BERNADOTTE, ILL., April 17, 1857.

PROF. N. S. DAVIS:—Another new "Pathy" is about to dawn upon the medical world. Shades of infinitessimal pills, red-pepper and steam, where are your virtues now? Come, quacks, here is a recipe for you.

An old woman in this town, on last Sabbath, while the citizens were attending Divine service, under the broad glare of the noonday sun, exhumed the remains of her son, who died some three years ago of pulmonary consumption, for the purpose of procuring a portion of its lungs to "make a tea" to cure a sick member of her family.

As there was nothing but bones in the coffin, of course the patient did not get its delectable "tea." I did not hear how this expectorant, this "balsam for the lungs," was to be prepared, but will let the Grave-o-pathists settle it for themselves.

It does not seem possible that we have, in this enlightened noonday of the nineteenth century, such awfully ignorant people; but it is nevertheless so, for this act can be attested by the best citizens in the place.

Yours truly, J. S. THOMAS.

De Witt County Medical Society.

The Society met in quarterly session at the school-house in Wapella, July 6, 1857, at 10 o'clock, A. M. Members present —Drs. Adams, McHugh, Lewis, Tyler, Madden, Hunt, Lake, Richards, Wright, Edmiston and Goodbrake; also, Dr. H. Noble and Dr. Laughlin, of Hayworth, McLean county.

The President, Dr. Adams, in the Chair.

The minutes of the previous meeting were read and approved.

On motion of Dr. Lewis, Drs. Noble and Laughlin were invited to participate in the proceedings of the meeting.

The Censors having reported favorable on the application of Joseph C. Ross, M. D., he was, on motion of Dr. Goodbrake, duly elected a member of this Society.

The reading of essays being in order, Dr. Madden read a paper on "Woman and her Diseases," which called forth quite a lengthy discussion, in which most of the gentlemen present partook, pending which the Society adjourned until 2 o'clock, P. M.

AFTERNOON SESSION.

The President called the Society to order at 2 o'clock, P. M.

Dr. McHugh read an essay on "The Practice of Medicine—What it was, what it is, and what it should be." The essay was well written, and was discussed at some length by several of the members present.

Dr. Richards tendered his resignation as Vice President, which was accepted, and Dr. John B. Hunt, of Waynesville, elected to serve as Vice President for the balance of the year.

On motion of Dr. Goodbrake, Dr. Harrison Noble was elected an honorary member of this Society. Dr. Noble, in a very eloquent manner, thanked the Society for the honor conferred.

On motion of Dr. Tyler, the following resolution was unanimously adopted:

Resolved, That the thanks of this Society are due and are hereby tendered to Dr. John Wright and lady, for the very excellent and sumptuous dinner served up at their residence for the members of this Society.

On motion, the thanks of this Society were tendered to Drs. Madden and McHugh for their excellent and instructive essays.

The President appointed Dr. B. S. Lewis and Dr. John J. Lake to write each an essay to be read before the Society at its next meeting.

On motion of Dr. Tyler, it was ordered that the proceedings of this meeting be published in the North-Western Medical and Surgical Journal, and the Central Transcript.

On motion, the Society adjourned to meet in semi-annual session at Waynesville, on the first Monday of October next, at 10 o'clock, A. M.

C. GOODBRAKE, Sec'y.

DEAR SIR:—At the Annual Meeting of the Illinois State Medical Society, held at Chicago on the first Tuesday in June

last, the undersigned were appointed a Committee to report on Practical Medicine.

In order to fully accomplish the object of the appointment, answers to the following questions are respectfully requested:

1. What have been the most prevailing diseases in your locality during the year? Give causes, symptoms, treatment and rate of mortality.

2. Has any unusual epidemic prevailed? If so, wherein have the symptoms differed from those seen in the same disease when occurring sporadically?

3. Is Typhoid Fever more prevalent than in former years? Does genuine Typhoid Fever prevail on the prairie? If so, does it present the same appearances as when found in the *timber?* Give distinctions, if any.

4. Do the ordinary diseases of your region seem to be undergoing changes from year to year, requiring different treatment? If so, what are those changes, and what different treatment is necessary?

5. What improvements have you to suggest in the treatment of any disease? Any new remedies to recommend, or any new applications of old remedies?

6. Has *Stomatitis Materni* prevailed in your locality? Have you ever met with a similar form of disease in infants or in men? Does the disease prevail most in miasmatic districts? Give suggestions as to causes and treatment.

7. Does *Milk Sickness* prevail in your vicinity? Is it Animal, Vegetable or Mineral in its origin?

8. Has *Cholera Infantum* prevailed with you during the year? Is it produced or modified by miasmatic causes. Do you agree with the opinion expressed by writers in the "Books?"

9. Please give topographical description of your locality, together with any facts that may come under your notice which will be interesting to the medical profession.

Please address F. K. BAILEY, M. D., Chairman of Committee, at Joliet, Will Co., Ill., as soon as 1st April, 1858.

F. K. BAILEY,
D. W. STORMANT,
A. J. CRAIN,
} Committee.

Proceedings of the Medical Society at the Meeting in Ottawa in May last.

Sometime in June I received from the Secretary a copy of the Proceedings of the Lasalle County Medical Society, with a request that they should be published in the *Journal*. I accordingly gave the manuscript to the printer, to be inserted in the number for July. As more manuscript was given to the printer than was required to fill that number of the *Journal*, this, together with one or two other short articles, was omitted and returned with the proof sheets. I again sent the Ottawa communication to the printer, with instructions to insert it in the number for August. When that number was made up, however, the article was again found missing, and I have not been able to find it since. The communication was short, occupying but one sheet of letter-paper, and might have been lost by the messenger in taking it to the printing office. The only matter of importance which it contained was the fact that Dr. D. D. Thompson, of Ottawa, had united with a Homœopathic practitioner of that city in business, and in consequence thereof had been expelled from the Medical Society. On the other hand, another physician, whose name we do not remember, who had been practising the "*little pill*" system, publicly renounced it and joined the regular society. I hope this explanation will be satisfactory to our friends in Ottawa; and if they send any more communications for the *Journal* I will see that they are properly taken care of.

Death of Dr. Marshall Hall.

We learn from the London *Lancet*, that this most distinguished Physiologist and Physician died at Brighton, England, on the 11th of August ult., aged 67 years. But few men have attained a higher or more deserved reputation than Dr. MARSHALL HALL, and his death will be universally regretted.

TO THE MEDICAL PROFESSION.

The subscribers would call the attention of physicians to the annexed list of Fluid Extracts, which we have been induced to prepare, from the difficulty of obtaining such preparations of a reliable character, and to obviate the great inconvenience of being dependent on distant manufacturers for articles of every day use by physicians.

By the process of percolation, carefully conducted, the crude material is completely exhausted of its medicinal virtues, and these, by subsequent evaporation, at a low temperature, are retained in their full original activity, and in a form highly concentrated, and exceedingly convenient for prescription.

We would respectfully invite physicians to make trial of the above, feeling confident that they will be found entirely reliable.

To those who prefer Tilden & Co.'s Extracts, we would say that we keep the usual assortment of their Solid and Fluid Extracts, and offer them at their prices. SARGENT & ILSLEY, Druggists, 140 Lake-street, Chicago.

Extractum	Aconiti Fluidum,	One fluid drachm is equal to	⅛	a drachm of the crude material						
"	Asclepiadis Tuberosæ,	"	"	"	"	"	"	"	"	"
"	Buchu,	"	"	"	"	"	"	"	"	"
"	Belladonnæ,	"	"	"	"	"	"	"	"	"
"	Cinchonæ (Calisaya),	"	"	"	"	"	"	"	"	"
"	Colombæ,	"	"	"	"	"	"	"	"	"
"	Conii,	"	"	"	"	"	"	"	"	"
"	Cimicifugæ,	"	"	"	"	1	"	"	"	"
"	Cubebæ, U. S.	"	"	"	"	"	ounce	"	"	"
"	Ergotæ	"	"	"	"	2	scruples	"	"	"
"	Gallæ,	"	"	"	"	½	a drachm	"	"	"
"	Gentianæ,	"	"	"	"	1	"	"	"	"
"	Hyoscyami,	"	"	"	"	½	"	"	"	"
"	Lobeliæ,	"	"	"	"	½	"	"	"	"
"	Opii,	"	"	"	"	about 5	grains	"	"	"
"	Pareiræ Bravæ	"	"	"	"	½	a drachm	"	"	"
"	Piperis Nig., U. S.,	"	"	"	"	2	ounces	"	"	"
"	Pruni Virg,	"	"	"	"	½	a drachm	"	"	"
"	Rhei, U. S.,	"	"	"	"	1	"	"	"	"
"	" et Sennæ,	"	"	"	"	45 grs. Senna 15 grs. Rhub.		"	"	"
"	Sanguinariæ	"	"	"	"	½	a drachm	"	"	"
"	Serpentariæ,	"	"	"	"	"	"	"	"	"
"	Scutellariæ,	"	"	"	"	"	"	"	"	"
"	Sarsaparillæ, U. S.,	"	"	"	"	1	"	"	"	"
"	Sennæ, U. S.,	"	"	"	"	"	"	"	"	"
"	" et Spigeliæ, U. S.,	"	"	"	"	30 grs. Pink-root, 15 grs. Senna,		"	"	"
"	Stillingiæ,	"	"	"	"	½	a drachm	"	"	"
"	Taraxaci,	"	"	"	"	1	"	"	"	"
"	Valerianæ, U.S.	"	"	"	"	½	"	"	"	"

Sargent & Ilsley's Solution of Chloride of Zinc,

For Purifying Sick Chambers, Sinks, Chamber Vessels, Vaults, Cellars, and for preserving Corpses, Preventing Moths, Exterminating Bugs, &c.

To obtain a substance harmless in itself, and free from smell, but possessed of the property of destroying all other smells, particularly such as are offensive or injurious to health, has long occupied the attention of scientific men It has been found that Chloride of Zinc possesses this power in a high degree and is also safe, economical and convenient.

It has received the sanction of the highest medical authority, and been very extensively introduced into the hospitals and public institutions of Europe and this country.

Our solution is of uniform strength, containing 35 per cent. of the dry chloride, and for most purposes should be diluted with twenty times its bulk of water. It is the cheapest, most effectual and convenient disinfectant known.

Its application is perfectly safe, both to persons and property; it is also free from the noxious and disagreeable odor of the chloride of lime, and the objections pertaining to the various disinfectants in common use. Full directions accompany each bottle.

Prepared by SARGENT & ILSLEY, Druggists, 140 Lake street. Chicago.

MEDICAL COLLEGE OF OHIO

SESSION OF 1857-8.

THE THIRTY-EIGHTH ANNUAL COURSE OF LECTURES IN THIS Institution will commence on the 15th of October, and continue until the 1st of March.

FACULTY.

L. M. LAWSON, M.D., *Prof. of Practice of Med. and Clin. Med.*
JESSE P. JUDKINS, M.D., *Prof. of Anatomy.*
GEORGE C. BLACKMAN, M.D., *Prof. of Surgery and Clin. Surg.*
GEORGE MENDENHALL, M.D., *Prof. of Obst. and Diseases of Women and Child.*
JAMES GRAHAM, M.D., *Prof. of Materia Medica and Therap.*
C. G. COMEGYS, M.D., *Prof. of Institutes of Medicine.*
H. E. FOOTE, M.D., *Prof. of Chemistry.*
THOMAS WOOD, M.D., *Prof. of Microscopic and Surgical Anatomy.*
JOHN A. MURPHY, M.D., *Adjunct Prof. of Pract. of Medicine.*
B. F. RICHARDSON, M.D., *Adjunct Prof. of Obst.*
WM. CLENDENIN, M.D., *Demonstrator of Anatomy.*

CLINICAL INSTRUCTION.

The Faculty are determined to devote much of their time and attention to Clinical instruction. The patients of the Commercial Hospital, St. John's Hotel for Invalids and City Dispensary (which are under the exclusive control of the Med. Col. of Ohio), will be examined, prescribed for or operated upon *daily* in presence of the class.

The Anatomical Rooms will be opened on the 1st of October. Material for dissection will be cheap and abundant.

FEES.

Professor's Ticket, . . .	$80 00	Matriculation Ticket (paid once), ...	$5 00
Dissecting Ticket, ...	6 00		
Hospital Ticket, ...	5 00	Graduation Fee, ...	25 00

At the close of the Session, the Faculty will elect from the class seven House Physicians, to reside in the Hospital and Dispensary for one year.

For further information, call at the College on Sixth Street, between Vine and Race, Cincinnati; or address,

GEORGE MENDENHALL, M.D., Registrar.

JAMES GRAHAM, Dean, 87 Seventh St.

STARLING MEDICAL COLLEGE.

SESSION OF 1857-58.

THE REGULAR SESSION OF STARLING MEDICAL COLLEGE WILL begin on Wednesday, the 14th day of October, 1857, and continue for *five full months.*

FACULTY.

S. M. SMITH, M. D.,
Professor of Theory and Practice, and Dean.

FRANCIS CARTER, M. D.,
Professor of Obstetrics and Diseases of Women and Children.

J. W. HAMILTON, M. D.,
Professor of Surgery.

JOHN DAWSON, M. D.,
Professor of General and Special Anatomy and Physiology.

S. LOVING, M. D.,
Prof. of Materia Medica, Therapeutics and Medical Jurisprudence.

THEO. G. WORMLEY, M. D.,
Professor of Chemistry.

R. N. BARR, M. D.,
Demonstrator of Anatomy.

FEES.

Tickets of all the Professors	$60.00
Matriculation Ticket	3.00
Graduation Fee	20.00
Ticket for the privilege of the Dissecting Room, including the services of the Demonstrator	5.00

Subjects for dissection in the building, furnished at a moderate expense, on application to the Demonstrator of Anatomy, *and in no other way.*

Inquiries and requests being sometimes made for indulgence in time, we propose to allow, in such cases, that a judgment note for $65, with interest and approved security, payable in one year, may be taken. But our *rule* is payment within the first three weeks of the session.

EXPENSES FOR A SINGLE SESSION.

Fees, including the Dissecting Ticket	$68.00
Boarding, including lights and fuel, from $2 to $3 per week, for twenty weeks	$40.00 to 60.00
	$108.00 to 128.00

There are three extensive Bookstores in Columbus, at which Medical works in great variety are sold at very low rates. Surgical, Obstetrical and Dissecting Instruments are readily obtained.

All letters of inquiry will receive prompt attention, if addressed to any member of the Faculty, or to **S. M. SMITH, Dean.**